

Process and apparatus for producing folding coupons

Patent claims:

- 5 1. Process for producing folded printing carriers  
made of thin material, namely folding coupons (10)  
made of paper, the folding coupon (10) being  
folded such that at least two folding legs (27,  
28) are connected to one another by adhesive  
10 bonding, characterized by the following features:  
a) areas of glue or regions of glue (18, 19) for  
adhesively bonding folding legs (27, 28) are  
applied in a precise position to a continuous  
material web (11) for producing the folding  
15 coupons (10),  
b) the regions of glue (18, 19) consist of hot  
glue (hot melt),  
c) blanks (25) are cut off from the material web  
(11) provided with set regions of glue (18, 19)  
20 and are fed to a folding subassembly (26) for  
carrying out folding operations and/or for  
producing the folding coupons (10),  
d) once the blank (25) has been folded, the  
regions of glue (18, 19), consisting of hot  
25 glue, are activated by the supply of heat and  
the folding legs (27, 28) are connected to one  
another by pressure.
- 30 2. Process according to Claim 1, characterized in  
that the regions of glue (18, 19) are applied  
during the production of the material web (11) and  
are made available to a packaging machine for  
producing packs with a folding coupon (10).
- 35 3. Process according to Claim 1 or 2, characterized  
in that, in the case of two-web production by  
virtue of blanks (25) being cut off from a double-  
width material web (11), two adjacent regions of

glue (18, 19) are applied in a precise position to the material web (11).

4. Process according to Claim 1, characterized in that blanks (25) are cut off from a double-width and double-layered material web (11) and are then further processed for forming a double-width folding coupon (10) and subsequently severed for producing individual folding coupons (10), two folding legs (27, 28) of the material web being folded to coincide with a central region of the material web (11), such that the double-layered material web (11) has folding edges along both borders.
5. Process according to Claim 4, characterized in that the legs (50, 51) of the material web (11) are spaced apart from one another by a small distance such that a longitudinal gap (52) is formed between the web legs (50, 51) in a longitudinal centre plane of the material web (11).
6. Process according to Claim 4, characterized in that the non-folded material web (11) has applied to it at least two regions of glue (18, 19) for each folding coupon (11) which is to be produced, for the purpose of connecting more than two folding legs (27, 28, 29) to one another.
7. Process according to Claim 6, characterized in that the folding coupons (10) produced from a two-layered blank (25) have two regions of glue (18, 19) for each folding coupon (10), the regions of glue (18, 19) being applied to opposite sides of the material web (11).
8. Apparatus for producing folded printing carriers - folding coupons (10) - by virtue of non-folded

blanks (25) being cut off from a material web (11) and folded in the region of a folding subassembly (26), characterized in that the (non-folded) material web (11) can be moved past at least one  
5 glue subassembly (20, 21) for the purpose of transferring regions of glue (18, 19) to the material web (11), it being possible for the glue subassembly (20, 21) to be controlled, in accordance with printed marks on the material web  
10 (11), via at least one printed-mark reader (22), and for blanks (25) provided with regions of glue (18, 19) then to be cut off from the material web (11) in a precise position in the region of a severing subassembly (24) and fed to the folding  
15 subassembly (26).

9. Apparatus according to Claim 8, characterized in that the - double-width - material web (11), following the glue subassemblies (20, 21), can be  
20 conveyed through a folding unit (63), it being possible for the material web (11) to be folded in a double layer in the region of the folding unit (63), with two web legs (50, 51) being formed along the borders in the process.

25 10. Apparatus according to Claim 8 or 9, characterized in that the folding subassembly (26) is followed directly by an arrangement (34) for the post-treatment of the folding coupons (10), having a  
30 heating station (35) for transmitting heat to the folding coupons (10) and for pressing the folding legs (27, 28, 29) of the folding coupons (10) together.

35 11. Apparatus according to Claim 10, characterized in that a severing station (36) is formed for severing double-width folding coupons (10) following the heating station (35), the station having at least one circulating, circular severing

blade (44) on a blade roller (45), and a mating roller (46).

- 5           12. Apparatus according to Claim 10, characterized in  
that the arrangement (34) for the post-treatment  
of the folding coupons (10) has a plurality of  
belt conveyors (37, 38, 39) for transporting the  
folding coupons (10), the belt conveyors (37, 38,  
39) being spaced apart from one another and having  
10       heating elements (42) arranged between them for  
the purpose of transmitting heat to the folding  
coupons (10).
- 15           13. Apparatus according to Claim 12, characterized in  
that the folding coupons (10), in the region of  
the heating station (35), can be transported  
between conveying strands (40, 41) of the belt  
conveyors (37, 38, 39) for the purpose of  
transferring pressure to the folding coupons (10).
- 20           14. Apparatus according to Claim 8, characterized in  
that the material web (11) can be directed through  
a stamping element (56) in order for transversely  
directed scores (61) to be provided in accordance  
25       with folding lines of the folding coupons (10),  
the stamping element (56) being arranged to follow  
the folding unit (63) for producing double-layered  
material webs (11).
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List of designations:

10	Folding coupon	37	Belt conveyor
11	Material web	38	Belt conveyor
12	Reel	39	Belt conveyor
13	Reel	40	Conveying strand
14	Splicing subassembly	41	Conveying strand
15	Pendulum mechanism for the web	42	Heating element
16	Unit	43	Supporting element
17	Web portion	44	Severing blade
18	Region of glue	45	Blade roller
19	Region of glue	46	Mating roller
20	Glue subassembly	47	Groove
21	Glue subassembly	48	Deflecting roller
22	Printed-mark reader	49	Deflecting roller
23	Advancement rollers	50	Web leg
24	Severing subassembly	51	Web leg
25	Blank	52	Longitudinal gap
26	Folding subassembly	53	Layer
27	Folding leg	54	Layer
28	Folding leg	55	Line
29	Folding leg	56	Stamping element
30	Folding leg	57	Top roller
31	Individual blank	58	Protrusion
32	Individual blank	59	Mating roller
33	Severing plane	60	Groove
34	Arrangement	61	Score
35	Heating station	62	Additional subassembly
36	Severing station	63	Folding unit